Coral Clinical Systems

Plot No. M – 46, Phase III B, Verna Ind. Estate,
Verna, Goa – 403 722, INDIA
Tel.: (0832) 6680121, Fax: (0832) 2887028

Corporate Office : "Gitanjali", Tulip Block, Dr. Antonio Do Rego Bagh, Alto Santacruz, Bambolim Complex Post Office, Goa – 403 202. INDIA.
Tel.: (0832) 2458546 – 51, Fax: (0832) 2458544

Material Safety Data Sheet

1. Product Identification

Product Name : **Calkine SGPT (ALAT) Kit (Mod. IFCC method)**

Catalog Number : GPT 120 / GPT 121 / GPT 122

2. Composition / Information on Hazardous Ingredients

Chemical Name	CAS #	% W/V	Exposure Limits in Air				
			ACGIH		OSHA		OTHER
			TLV	STEL	PEL	STEL	

Reagent 1: Enzyme Reagent

Hydrochloric acid	7647-01-0	2.7%	N/A	5 ppm C	N/A	5ppm C	NIOSH REL 5ppm C
Sodium Azide	26628-22-8	0.2	N / A	0.29 mg/m^3	N / A	N / A	NIOSH 0.3 mg/m^3 C (skin)

Reagent 2: Starter Reagent

Sodium Azide	26628-22-8	0.2	N / A	0.29 mg/m^3	N / A	N / A	NIOSH 0.3 mg/m^3 C (skin)
Potassium hydroxide	1310-58-3	1.6%	C 2 mg/m^3	N/A	C 2 mg/m^3	N / A	N / A

Reagent 3: N/A.

Reagent 4: N/A

Reagent 5: N/A

3. Hazard Identification

Primary Routes of Entry:
Inhalation, Ingestion, Skin and / or Eye contact.

Inhalation:
Sodium Azide: Inhalation of vapors may cause headache, nausea, dizziness, fatigue, cyanosis, weakness in arms and legs. **Hydrochloric acid**: Inhalation of vapors may cause pulmonary edema, circulatory systems

collapse, damage to upper respiratory system, coughing, and difficult breathing.. **Potassium Hydroxide**: Irritation of respiratory tract, inflammation of lungs, difficulty in breathing. May cause pulmonary edema.
Ingestion:
Sodium Azide: Ingestion may cause nausea, vomiting, headache, dizziness, gastrointestinal irritation, blurred vision, lowering of blood pressure. **Hydrochloric Acid**: Ingestion is harmful and may be fatal. Ingestion may cause severe burning to mouth and stomach, nausea and vomiting. **Potassium hydroxide**:

Plot No. M – 46, Phase III B, Verna Ind. Estate,
Verna, Goa – 403 722, INDIA
Tel.: (0832) 6680121, Fax: (0832) 2887028

Ingestion may lead to abdominal pain, burning of mouth, throat, and esophagus, vomiting, diarrhea, edema, swelling of larynx, and subsequent suffocation. Perforation of gastrointestinal tract can take place.

Skin Contact:
Sodium Azide: Contact with the skin, may develop mild irritation. Sodium Azide may enter body through skin. **Hydrochloric Acid**: Contact with the skin may cause severe burns. **Potassium hydroxide**: May cause severe burning, frequently deep ulcerations and ultimate scarring. Destructive effects on tissues.

Eye Contact:
Sodium Azide: Contact with the eyes, may develop mild irritation. **Hydrochloric Acid**: Liquid may cause severe burns to eyes. **Potassium hydroxide**: instantaneous painful irritation of the eyes, can penetrate deeply causing irritation or severe burns depending on the concentration and duration of exposure, in severe cases, ulceration and blindness may occur.

Chronic Exposure:
Hydrochloric Acid: long term exposure to vapors may cause pulmonary edema and damage to upper respiratory systems. **Potassium hydroxide**: repeated/ prolonged contact with skin can be destructive to tissue.

Medical Conditions Aggravated by Exposure:
Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

Health Effects:
The vapours or liquid can rapidly injure exposed tissue, cause skin and eye damage, and irritate mucous membranes and the respiratory tract. Health hazards given on this data sheet apply to concentrated solutions of Hydrochloric acid and Potassium Hydroxide. Hazards of dilute solutions may be reduced, depending upon the concentration.

4. First Aid Measures

Inhalation:
If breathing becomes difficult, remove victim to fresh air. Seek medical attention immediately.

Ingestion:
Do not induce vomiting. If vomiting occurs, lean victim forward to prevent breathing in vomitus. Give a cup of water to dilute chemical in stomach. If vomiting occurs, give another cup of water after vomiting. Do not give anything to an unconscious person. Seek medical attention immediately.

Skin Contact:
Avoid skin contact. If skin contact occurs, remove contaminated clothing and wash exposed skin with plenty of water for atleast 15 minutes. Get medical attention immediately.

Eye Contact:
Immediately flush eye(s) with large volume of water for atleast 15 minutes, occasionally lifting the lower lids. Get medical attention immediately.

5. Fire Fighting Measures

Flash Point (Method used): N/A **Flammable Limits – LEL:** N/A **UEL:** N/A

Extinguishing Media:
Use fire extinguishing media appropriate for site conditions.
Special Fire Procedures:
Firefighters should wear proper protective equipment and self contained breathing apparatus with full facepiece operated in positive mode. Move containers from fire area if it can be done without risk. Use water to keep fire exposed containers cool. Do not get water inside containers.

Unusual Fire and Explosion Hazards:
Sodium azide: can react with copper, lead, brass, or solder in plumbing to form explosive compound of Lead Azide and Copper Azide. Sodium Azide can react with acids to form explosive hydrogen Azide.
Hydrochloric Acid: may emit Hydrogen gas upon contact with metal.

6. Accidental Release Measures

Steps to be taken in case material is Released or Spilled:

Plot No. M – 46, Phase III B, Verna Ind. Estate,
Verna, Goa – 403 722, INDIA
Tel.: (0832) 6680121, Fax: (0832) 2887028

PPE should be level D: lab gloves, chemical resistant apron, boots and splash goggles. Use an absorbent material to contain / pick up the spilled solution. Place all spill residue into a suitable container, seal, label and hold for disposal.

7. Handling and Storage

Refer to packet insert for additional information on handling and storage procedures.

8. Exposure Controls and Personal Protection

Ventilation Data:
A system of local and / or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection:
Respiratory protection is not required under normal use of this product. If respiratory protection is needed, follow OSHA respirator regulations (29CFR1910.134) and, if necessary, wear a NIOSH approved respirator. Select respirator based on its suitability to provide worker protection for given working conditions, level of airborne concentration, and presence of sufficient oxygen.

Protective Gloves:
Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.
Other Protective Equipment:
Wear appropriate eye protection to prevent eye contact. Wear appropriate body protection to prevent skin contact.
Other Engineering Controls:
Eye wash stations and deluge showers.
Work Practices:
Good laboratory technique should be used when handling this product. Observe appropriate chemical hygiene. Avoid contact with eyes or skin. Do not place in mouth.
Hygienic Practices:
Do not eat, drink, or smoke while working with product. Upon completion of work activities involving this product, wash hands thoroughly with soap and water.

9. Physical And Chemical Properties

For All Components Unless Otherwise Indicated

Relative Vapour density(air = 1) :	N/A	Evaporation rate(nBuAc = 1):	N/A
Specific Gravity (water = 1) :	N/A	Freezing / Melting Point :	N/A
Solubility in Water :	Soluble	Boiling Point :	N/A
Vapour Pressure, mm Hg @ 20°C:	N/A	pH :	N/A

Odour and Appearance Information
Reagent 1: Clear, Colourless liquid
Reagent 2: Clear, Colourless liquid
Reagent 3: N/A
Reagent 4: N/A
Reagent 5: N/A.

10. Stability and Reactivity

Incompatibility (Materials to Avoid):
Sodium Azide: Strong bases, strong acids, metals, strong oxidizers and water reactive materials. **Hydrochloric Acid**: Metals, Metal oxides, Amines, Acetic Anhydride, and Carbonates. **Potassium Hydroxide**: Metals, Organohalogen compounds, flammable liquids, and nitrous compounds.
Hazardous Decomposition Products:
Sodium Azide: May generate toxic products. **Hydrochloric Acid**: Hydrogen gas, Hydrogen chloride, Chlorine.
Will Hazardous Polymerization Occur?
Hazardous polymerization will not occur.
Conditions to Avoid / Polymerization: N/A

Plot No. M – 46, Phase III B, Verna Ind. Estate,
Verna, Goa – 403 722, INDIA
Tel.: (0832) 6680121, Fax: (0832) 2887028

Is the Product Stable?
Yes, under normal handling and storage conditions.
Conditions to Avoid/stability

Sodium Azide: Avoid acidification of solution, which may generate hydrogen cyanide gas. **Hydrochloric Acid**: Heat and moisture.

11. Toxicological Information

Toxicity Data:
Sodium Azide (Undiluted): LD50 (rat and mouse, oral)=27mg/kg; LD50 (rabbit, skin)=20mg/kg.
Hydrochloric acid: eye irritancy (rabbit)-1% solution/20sec., comeal scarring; Eye irritancy (rabbit)= 5mg/30sec, mild; eye irritancy (rabbit)=100mg/rinse, mild; skin irritancy (rabbit)=0.5ml/17% solution/4hours, corrosive burns.
Sodium hydroxide: is considered a severe skin and eye irritant based on irritation data: skin, rabbit 500 mg / 24 hours; eye, rabbit 50 micrograms/24 hours.
Reproductive effects:
N/A.
Target organ Effects:
Sodium Azide: Eyes, Skin, central nervous systems, cardiovascular systems. **Hydrochloric Acid**: Eyes, Skin and Respiratory system. **Potassium Hydroxide**: Eyes, Skin and Respiratory system.

Carcinogenicity: No

CHEMICAL NAME	CAS #	% W/V	NTP Carcinogen		IARC	OSHA
			Known	Anticipated		
N/A.						

12. Ecological Information

Environmental Fate / Stability:
N/A
Effect of Material on plants or animals:
N/A
Effect of Chemical on Aquatic Life:
N/A

13. Disposal Considerations

EPA Waste Number and Proper Waste Disposal Method:
Please consult local, state and federal regulations for additional guidance on disposal.

14. Transportation Information

Is this Material Hazardous? Not regulated under transportation regulations.

Proper Shipping Name : N/A		
Hazard Class Number : N/A	Packing Group: N/A	UN Number: N/A

15. Regulatory Information

NA.

16. Other Information

NA => NOT APPLICABLE or NO INFORMATION